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Discipline Responses: Influences of Parents' Socioeconomic Status, Ethnicity, Beliefs About Parenting, Stress, and Cognitive–Emotional Processes

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Abstract

Direct and indirect precursors to parents' harsh discipline responses to hypothetical vignettes about child misbehavior were studied with data from 978 parents (59% mothers; 82% European American and 16% African American) of 585 kindergarten-aged children. SEM analyses showed that parents' beliefs about spanking and child aggression and family stress mediated a negative relation between socioeconomic status and discipline. In turn, perception of the child and cognitive–emotional processes (hostile attributions, emotional upset, worry about child's future, available alternative disciplinary strategies, and available preventive strategies) mediated the effect of stress on discipline. Similar relations between ethnicity and discipline were found (African Americans reported harsher discipline), especially among low-income parents. Societally based experiences may lead some parents to rely on accessible and coherent goals in their discipline, whereas others are more reactive.

Parent discipline practices are integral in theories of children's socialization. Parents' use of physical punishment with their child is of special interest. Numerous theories posit a role for physical punishment in the development of antisocial behavior in children. According to one set of theories, discipline responses are made in the context of multiple influences ranging from more distal factors such as culture, ethnicity, and socioeconomic status (SES) to more proximal factors such as available social supports, family structure, and family processes (Belsky, 1984; Luster & Okagaki, 1993; Rubin, Stewart, & Chen, 1995). Indeed, SES and ethnic differences have been found consistently in physical punishment (e.g., Deater-Deckard, Dodge, Bates, & Pettit, 1996; Dodge, Pettit, & Bates, 1994; Luster, Rhoades, & Haas, 1989; McLoyd, 1990). More proximal influences such as stress also have been linked to punitive parenting (e.g., McLoyd, Jayaratne, Ceballo, & Borquez, 1994). Another set of theories suggests that the most proximal influence on discipline responses can be found in parents' cognitive–emotional

processes regarding situationally based child misbehavior (e.g., Dix, 1993). This study drew from these two sets of literature to examine relations among contextual influences, cognitive–emotional processes, and parents' use of physical or harsh punishment. Consistent with Luster & Okagaki (1993), who have suggested several patterns through which contextual influences may affect discipline responses, this study examined direct and mediated relations among SES, ethnicity, gender, stressors, parents' perception of the child, parenting beliefs, cognitive–emotional processes, and the use of physical and harsh punishment (hereafter referred to as discipline responses). Two models of direct and mediated relations between SES and discipline responses and between ethnicity and discipline responses were tested. The theoretical and empirical literatures supporting these models are discussed next.

Direct and Mediated Relations Between SES and Parenting

Figure 1 presents a model of direct and mediated relations between SES and discipline responses. SES has been found consistently to have negative relations with physical and harsh punishment. Although there may be differences in this relation across ethnicity (e.g., Deater-Deckard et al., 1996), this relation is hypothesized to hold within ethnicity.

Parenting Values and Beliefs

As Figure 1 depicts, one theorized pathway linking SES and parenting practices is parenting beliefs (Kohn, 1963; Okagaki & Divecha, 1993). With a sample of European American mothers, Luster et al. (1989) found that SES was negatively related to values embracing conformity and positively related to values endorsing self-direction. In turn, the effect of these parental values on parenting behaviors was mediated by parenting beliefs about discipline, promoting exploratory behavior, and affectionate, responsive behavior. This leads to the question of whether the relation between SES and parenting behavior could be mediated by parenting beliefs. Several studies illustrate the link between parenting beliefs and attitudes and parenting behavior (e.g., Dix, 1993; Luster et al., 1989). Luster and Kain (1987) found differences between parents who believed that parenting positively affects child outcomes (high efficacy) and parents who believed that parenting has little effect on child outcomes (low efficacy). Parents high in efficacy endorsed love, affection, and modeling as critical influences, whereas parents low in efficacy, especially fathers, tended to endorse discipline.

Stressors, Parent Perception of the Child, and Parent Cognitive–Emotional Processes

Another pathway through which SES is hypothesized to influence differences in discipline responses is stress: Economic hardship exposes low-SES parents to additional stressors that undermine their ability to use inductive discipline strategies and that result in higher parental reliance on punitive discipline (see McLoyd, 1990, for a review of the literature on these relations). Parental stress has been found to be associated positively with punitive parenting practices (e.g., Crnic & Greenberg, 1987; McLoyd et al., 1994; Patterson, 1986). Low SES may operate through the following specific stressors that are associated with punitive and unsupportive practices: being a single parent (e.g., Fox, Platz, & Bentley, 1995), having a large number of children (e.g., Fox et al., 1995), having an unplanned pregnancy (e.g., Zuravin, 1987), and living in an unsafe neighborhood (e.g., Abell, Clawson, Washington, Bost, & Vaughn, 1996).

Parents' Perception of the Child

Although external stressors are hypothesized to have a direct link to parents' discipline responses, their influence also may be mediated by parents' perception of the child and parents' cognitive–emotional processes when faced with child misbehavior. External stressors have been found to predict parents' negative views of the child (Conger, McCarty, Yang, Lahey, & Kropp, 1984). And parents' perception of child functioning has been linked to parenting

behaviors, particularly among parents of aggressive children (Rubin et al., 1995). Aggressive behavior by children in preschool and early elementary school tends to evoke negative parent emotions and cognitions, which lead to more negative parenting behaviors (Rubin & Mills, 1992; Rubin et al., 1995).

Parents' Cognitive–Emotional Processes

McLoyd (1990) noted that stressful life conditions facing low-income parents undermine their emotional state. Dix (1991) has suggested that high levels of stressors negatively affect parents' cognitive–emotional processes. Several links have been found between cognitive–emotional processes and parents' discipline responses. First, it has been shown (e.g., Dix, Ruble, & Zambarano, 1989; MacKinnon-Lewis, Lamb, Arbuckle, Baradaran, & Volling, 1992; Strassberg, 1995) that parents' tendency to make hostile attributions about the child correlates with punitive parenting. Second, intense negative affect about child misbehavior may be related to use or endorsement of forceful discipline (Dix, 1993; Dix & Lochman, 1990). Third, parental worry about the future implications of current child misbehavior may affect discipline responses. This process may be intensified when important socialization goals are involved (Dix, 1991, 1993). For example, a parent who values obedience is more likely to become upset over his or her child's defiance than is a parent who places less value on obedience. These different emotional reactions to defiance might lead to different discipline responses. Fourth, parental perceived control over the misbehavior is another process that may affect discipline responses (Dix, 1991). Parents who perceive that they lack control over the misbehavior in question are more likely to have negative emotions than those who believe they can control the misbehavior (Bugental, Blue, & Lewis, 1990). In this study, perceived control over the misbehavior was assessed in two ways: the degree to which parents perceived that they could prevent the problem behavior in the future and the variety of noncoercive alternative disciplinary strategies they reported as being available to them.

Direct and Mediated Relations Between Ethnicity and Parents' Discipline Responses

The direct and mediated relations between ethnicity and discipline responses were theorized to be the same, with one key difference. SES was expected to moderate relations between ethnicity and stress. The literature supporting this model is summarized next.

Ethnicity and Parenting Beliefs

African American mothers have reported greater use of physical discipline than do European American mothers (Deater-Deckard et al., 1996). African American parents also have displayed more punitive attitudes toward their children (e.g., Reis, Barbera-Stein, & Bennett, 1986). How parents think about physical or severe discipline and its purpose as a socialization strategy may differ for African Americans and European Americans (e.g., Deater-Deckard & Dodge, 1997; Garcia Coll, 1990; Jackson, 1997; Kelley, Power, & Wimbush, 1992; Ogbu, 1981). For example, ethnic differences have been found in parents' acceptance of spanking (Heffer & Kelley, 1987). Thus, this study represents a further step in examining ethnic differences in parenting (Deater-Deckard et al., 1996; Pettit, Bates, & Dodge, 1997) by specifically assessing whether parenting beliefs mediate relations between ethnicity and discipline.

Ethnicity, Stress, Parents' Perceptions of the Child and Cognitive–Emotional Processes

Researchers have noted the moderating role of SES in relations between ethnicity and stressors (McLoyd, 1990; Myers & King, 1983). In their study of race, SES, and distress, Kessler and Neighbors (1986) found that low-income African Americans were particularly vulnerable to

additional race-related stressors and constraints and reported higher levels of stress than did low-income European Americans. In contrast, no differences emerged between stress levels reported by middle-income African Americans and European Americans. These findings were consistent across multiple epidemiological data sets. With higher levels of stress, low-income African American parents may be likely to engage in more punitive discipline responses (e.g., McLoyd, 1990). In the study reported here, SES was hypothesized to moderate relations between ethnicity and stressors. Low-income African American parents were expected to report greater stress and to endorse more physical and harsh discipline responses than their European American counterparts. Among middle-income parents, no ethnic differences in level of stressors were expected, and no differences were expected in relations between level of stressors and discipline.

In summary, this study tested direct and indirect contributions of SES to discipline responses and direct and indirect contributions of ethnicity to discipline responses. The study, part of a longitudinal investigation of child development, used cross-sectional data. Parents' responses to multiple hypothetical vignettes involving child misbehavior were the measure of discipline responses. Parenting beliefs, family stress, parents' perception of the child, and cognitive–emotional processes were hypothesized to mediate relations between SES and discipline responses and relations between ethnicity and discipline responses. Parenting beliefs included beliefs about (a) the effectiveness of spanking and (b) the appropriateness of peer-directed aggression by the child. Stressors included marital status, number of children, having an unplanned pregnancy, living in an unsafe neighborhood, and conflict in romantic relationships. Parent perception of the child was assessed as the distinctiveness of the description of the child and parental affect toward the child. Cognitive–emotional processes included hostile attribution of the child, upset affect about the misbehavior, concern about the future implications of the misbehavior, available alternative discipline responses, and preventive discipline responses.

This study included fathers as respondents. Fathers' voices are relatively rare in the literature on parenting (Phares, 1996). Although mothers and fathers have been found to engage in similar levels of harsh discipline (e.g., Feldman & Wentzel, 1990), research on relations among contextual influences, cognitive–emotional processes, and discipline responses has focused primarily on mothers. Thus, inclusion of fathers here has the potential to extend current understanding of parents' discipline responses. More specifically, this design enabled examination of parent sex as a moderator of relations among SES, ethnicity, parenting beliefs, stress, perceptions of the child, cognitive–emotional processes, and discipline responses, which Phares (1996) and Rubin et al. (1995) noted are important new avenues for study.

Method

Participants

Respondents in this study were participants in the Child Development Project (described in previous reports; e.g., Dodge et al., 1994; Pettit et al., 1997). They were selected in two cohorts from Nashville, Tennessee (a midsized mid-South urban community with about 25% of the participants residing in federally subsidized housing); Knoxville, Tennessee (an Appalachian rural and small urban community); and Bloomington, Indiana (a small midwestern city, with many of the participants selected from working-class backgrounds, including some rural families of Appalachian descent). Families were recruited at the time of the kindergarten preregistration and (in April or August preceding the September of matriculation) asked to participate in a longitudinal study of child development. Two cohorts of participants were recruited in successive years. About 70% of families agreed to participate. Because about 15% of kindergartners do not preregister, this proportion of the sample was recruited in August by mail, letter from school, or telephone. Of the 585 participating families, 52% had a male child,

and 48% had a female child; 82% were White, 16% were African American, and 2% were from other ethnic backgrounds, mostly Asian American. When the father lived in the same home as the child, both parents were invited to participate. Of the 978 participating parents, 581 were mothers, including adoptive mothers and stepmothers (475 White, 95 African American, and 11 other), and 397 were fathers, including adoptive fathers and stepfathers (358 White, 30 African American, and 9 other). Of the 585 families, both parents participated in 393 cases, mothers only participated in 188 cases, and fathers only participated in 4 cases.

Procedure

In the summer before—or, in some cases, soon after—the child's matriculation in kindergarten, two trained interviewers visited the mother, father, and child in their home for a 3-hr session. In almost all cases, at least one of the two visitors was of the same ethnicity as the family. One visitor obtained written informed consent and then privately interviewed one randomly selected parent while the second parent completed a battery of written instruments. The other visitor interviewed the child to collect information not relevant to this article. After about 90 min, the two parents switched roles. The parent interview consisted of a demographic survey, a history of the child's development, and parenting divided into past and current (past 12 months) eras. This interview was followed by the presentation of five hypothetical parenting situations designed to solicit parent discipline responses and cognitive–emotional processes. A written battery further assessed the parent's discipline responses and values and the child's behavior.¹

The parent interviewer was trained over a 4-week period that included reading a detailed procedure manual, observing interviews by a master interviewer, and conducting interviews with a supervisor present. Interviewers were trained to a reliability of .80 or higher (percentage agreement across all items, with the supervisor's scores as the criterion) before they began to collect data on their own. Independent reliability assessments were obtained by a trained observer who either accompanied the interviewer for or listened to tapes of 56 randomly selected interviews.

Constructs and Measures

Demographic characteristics—Parent sex (1 = mother, 2 = father) and child sex (1 = boy, 2 = girl) were coded via interviewer observation. Ethnicity (1 = White, 2 = African American, 3 = other) was coded via direct questions to the parent. During the interview, the parent's and partner's education and employment status were solicited. Family SES was computed with Hollingshead's (1979) four-factor index of social status (based on parent and partner education and current occupation; sample $M = 39.5$, $SD = 14$). As recommended by Hollingshead, when fathers did not reside in the home, the mother's scores were double weighted. Parent education level was coded via Hollingshead's 7-point scale ($M = 4.7$, $SD = 1.3$). Parent past-year employment status was coded, on a 3-point scale, as unemployed outside the home, employed part time, or employed full time ($M = 2.5$, $SD = 0.8$).

General parenting beliefs were assessed with two variables. The parent completed a newly developed, 15-item written instrument, the Culture Questionnaire, in which she or he read a statement and responded on a 7-point scale ranging from definite disagreement to definite agreement. Six items were used for this study. One item (reverse scored) constituted the parent's belief that spanking works (“When my child does something wrong, talking about it with her/him helps more than spanking”); $M = 4.57$, $SD = 1.6$. The mean of 5 items constituted a

¹Interviewers read questionnaires to parents who had difficulty reading items to ensure that parents understood the questions. Interviewers also rated level of literacy (degree of difficulty reading and understanding questionnaires). Correlations between this literacy measure and parent reports on written measures ranged from .024 (ns) to .11 ($p < .01$). We concluded that literacy had a modest impact on written responses.

measure of the parent's aggressive values for the child ($M = 2.57$, $SD = 1.0$; $\alpha = .52$): "I would want my child to defend himself/herself even if it meant hitting another child"; "I wouldn't try to stop my child's fighting because my child has to show that s/he can defend herself/himself"; "Sometimes a physical fight might help my child have a better relationship with another child"; "If I found out my child hit another child, I would be disappointed no matter what the reason" (reverse scored); and "I wouldn't mind if my child got a reputation as the toughest kid in school."

Family stress was assessed with five variables. Parent marital status was coded on a 2-point scale as married (which included cohabitating with a partner for at least the past year) or single ($M = 1.26$, $SD = 0.4$). The number of children living in the home was recorded directly ($M = 2.20$, $SD = 1.0$). During the interview, the child's birth history was reviewed, and the degree of planning of the pregnancy was discussed. Unplanned pregnancy was coded on a 4-point scale as *unprepared* (1), *not planned but accepted* (2), *partially planned or under discussion* (3), or *planned* (4; $M = 2.01$, $SD = 1.09$). Reliabilities of the family stress measures, computed with the kappa statistic, ranged from .63 to .87.

During the interview, family stressors were discussed in the context of influences on the child's development. The parent was asked the following: "All families have conflicts, parents and kids. What kinds of conflicts, arguments, or violence was your child aware of during this past year (including shouting, physical fights, pushing, etc.)?" The interviewer probed for descriptions of arguments and any involvement by outside agencies. Separate questions asked about marital conflict, parent-child or sibling conflict, and neighborhood conflict. The parent was encouraged to talk freely about the number, range, and severity of conflicts. On the basis of the parent's description, the interviewer privately rated the degree of partner conflict on a 6-point scale of increasing severity (0 = *no partner or no conflict*, 1 = *rarely even shouting*, 2 = *numerous mild verbal arguments reported*, 3 = *numerous major verbal arguments reported*, 4 = *mild physical fights or frequent major verbal arguments reported*, 5 = *more than one major physical fight reported*; $M = 1.75$, $SD = 1.1$). Independent rater agreement on this coding was computed by Pearson correlation to be .70 ($p < .001$). The interviewer also rated the child's exposure to violence outside the parental dyad, including other familial violence and neighborhood violence (1 = *none*, 2 = *mild verbal arguments*, 3 = *major verbal arguments*, 4 = *mild physical fights or frequent major verbal arguments*, 5 = *more than one major physical fight*; $M = 1.60$, $SD = 0.9$). Independent rater agreement (r) was .69 ($p < .001$).

Later during the interview, the interviewer asked a number of questions about the parent's experience of stress during the previous 12 months. Prompting from a list of 14 common stressful life events, the interviewer asked questions, including "What changes or adjustments occurred in your family?" "How did these changes affect your child?" "How Were you doing during the past year?" and "Did you have chances to get out and do the things you enjoy, with or without the family?" The interviewer then Privately rated the parent's experience of stressors (stress rating) on a 5-point scale ranging from *minimal challenges* (1) to *severe and/or frequent challenges* (5; $M = 2.62$, $SD = 1.1$). Independent rater agreement was .75 ($p < .001$).

Perception of child—Two scores were derived to measure the parent's affect about the child and evaluation of the child. At the beginning of the interview, the parent was asked to describe the child freely for up to 5 min without interruption. The interviewer then rated the parent's positive affect toward the child on a 3-point scale ranging from *mostly negative* to *mostly positive* ($M = 2.60$, $SD = 0.6$). The Pearson correlation coefficient for agreement was .56 ($p < .01$). The interviewer also rated the level of distinctive description of the child—specifically, the parent's ability to describe the child uniquely, with great detail and understanding—on a 3-point scale ranging from *vague and indistinct* to *distinct and insightful* ($M = 2.13$, $SD = 0.7$). Reliability, computed with the Pearson correlation coefficient, was .67 ($p < .001$).

Cognitive–emotional processes in parenting were assessed with five variables. In the last part of the interview, parents were presented with each of five hypothetical vignettes designed to elicit cognitive–emotional processes in decision making in response to child misbehavior. For each vignette, the parent was asked to imagine that her or his child had engaged in a particular misbehavior in an ambiguous context. For example, in one vignette, the parent was asked to imagine the following: “You go to your child's school to pick him or her up. You see all the kindergarten children running to get into line. One of the other children runs hard and bumps into your child. The other kids laugh. Your child gets upset and pushes the other kid to the ground” (Story 2). The other vignettes described the child calling the winner of a race a bad name (Story 1), the child threatening peers who had excluded the child from a game (Story 3), the child excluding a cousin from a birthday party invitation list (Story 4), and the child teasing a peer (Story 5).

After each vignette, the parent first was asked why the child might have acted in the manner described. As a means of measuring the parent's hostile attribution to the child, responses were scored as 1 if the parent indicated that the child had acted with hostile intent or in a negative-trait-like manner (or, in 3% of the cases, if the parent could not generate an explanation) and 0 if the parent attributed the blame to any other cause (including the demands of the situation, the child's temporary state, the child's misinterpretation of peer behavior, or the peer's behavior) or reported that the behavior was not indicative of a problem (across five vignettes, $M = .24$, $SD = .21$).

Second, the parent was asked to rate how she or he would feel if the child had behaved this way (upset affect); responses ranged from *very good and not upset* (1) to *very bad and upset* (5; $M = 3.99$, $SD = 0.5$). Next, the parent was asked what she or he would do if the child behaved this way. Free responses were solicited that could include multiple behaviors. The full response was coded as 1 if it included physical punishment and 0 if not ($M = .06$, $SD = .13$). The response was separately coded as 1 if it included reasoning, explanations, discussion, inductive reasoning, or proactive guidance and 0 if not, as a measure of an acceptable alternative to physical punishment ($M = .77$, $SD = .24$). A parent's response could be coded as including both of these alternatives or neither alternative.

Third, as a measure of severity of discipline response, the parent was asked to rate whether she or he would punish the child and, if so, how much. Response options were *not at all* (1), *a little* (2), *moderately* (3), *somewhat* (4), and *very sternly* (5; $M = 2.50$, $SD = 0.9$).

Next, the parent was told “Children sometimes do things that make their parents worry that they will have some problems. Some things parents don't worry about because they know their children will grow out of it. If your child acted this way most of the time, how worried would you be that your child would grow up to have problems later on?” Parents rated their worry about the child's future on a 5-point scale ranging from *not at all* (1) to *very worried* (5; $M = 3.43$, $SD = 0.9$).

Finally, the parent was asked “What could you as a parent do to prevent your child from acting this way in the first place?” The free response was coded as a measure of available preventive strategies in the parent's repertoire, with 1 coded if the response included a before-the-fact preventive strategy and 0 coded if the parent reported that the behavior could not be prevented or the parent could generate only an after-the-fact response ($M = .09$, $SD = .16$). Reliability was assessed on this measure with a subset of families ($n = 24$; Pettit et al., 1997). The correlation between independent raters for the number of times mothers identified a preventive strategy was .56. Because interviewers were trained to a high level of reliability (.80) before beginning to collect data, reliability of coding on variables for which code options (i.e., hostile

attribution, physical punishment, and alternative punishments) were clear and unambiguous was not specifically assessed.

Harsh discipline response styles were assessed with four variables. In addition to the two scores for harsh discipline assessed in response to each of the five hypothetical vignettes (physical punishment and severity of discipline response), two other scores were computed for harsh discipline used by the parent. The first score was a rating made by the interviewer after asking the following questions: “What kinds of misbehavior over the past year did your child do that you had to deal with?” “What kinds of things did you have to do to deal with his/her misbehavior?” “How often did you have to physically punish your child, such as spank, grab, or shake?” and “What was the most severe thing you had to do during this period?” The interviewer then privately rated the parent's harshness of discipline on a 5-point scale ranging from *nonrestrictive, mostly positive guidance* (1) to *severe, strict, often physical punishment* (5; $M = 2.60$, $SD = 0.9$). Independent rater agreement on this rating was .73 ($p < .001$). (Because this rating was made early in the interview, it was not affected by parents' responses to the five vignettes.)

The fourth measure of harsh discipline was obtained from parent self-reports on a revision of the Conflict Tactics Scales (CTS; Straus, 1979). Cohort 1 parents were asked to report the frequency with which they displayed aggressive behaviors toward their child for each of two eras of the child's life (birth to 4 years of age and the previous 12 months). Response options ranged from *never* (0) to *more than once a month* (5). A physical aggression toward child scale was derived as the mean of 10 items ($\alpha = .87$; items were, for each of two eras, “threatened to hit or throw something at your child”; “threw something at your child”; “pushed, grabbed, or shoved your child”; “hit or tried to hit your child”; and “hit or tried to hit with something”). Straus and Gelles (1990) reported “strong evidence of construct validity” (p. 72) for this scale. For parents in Cohort 2, the “threatened to hit or throw something at your child” item was divided into 2 items, and the six response options were rescaled to range from *never* to *almost every day*. Thus, 14 items were included in this measure. To control for these cohort differences, we standardized scores within cohorts ($M = 0.0$, $SD = 1$).

Results

Preliminary Analyses: Cognitive–Emotional Processes and Discipline Responses

Because scholars differ about whether relations between cognitive–emotional processes and parenting behavior are best assessed within situation (e.g., Sigel, 1986) or across-situation (e.g., Goodnow, 1984) analyses were initially conducted separately for each of the five hypothetical situations. Regression analyses revealed cross-situation consistency in relations between cognitive–emotional processes and physical punishment and severity of punishment. In addition, analyses testing parent sex differences in these relations showed that the processes contributing to discipline responses did not differ appreciably for mothers and fathers. Given these findings, and to describe the process of parenting decision making most efficiently, we averaged scores across the five situations.

Multivariate analyses of covariance (with SES as the covariate) were conducted on the five cognitive–emotional processing cross-situational variables (hostile attributions, upset affect, worry about the future, alternative discipline strategies, and preventive discipline strategies) and two hypothetical discipline cross-situational variables (severity of punishment and physical punishment); parent ethnicity, gender of parent, and gender of child were independent variables. The adjusted group means are listed in Table 1. Parent ethnicity yielded a significant main effect, $F(7, 926) = 3.13$, $p < .001$. Univariate analyses revealed a main effect due to parent ethnicity on three variables. Relative to African Americans, European American parents made fewer hostile attributions about their child, $F(1, 932) = 4.95$, $p < .03$; were less worried about

their child's future, $F(1, 932) = 8.45, p < .001$; and endorsed less severe punishment, $F(1, 932) = 7.46, p < .001$.

Analyses of covariance were conducted on the two actual discipline variables (from the global interviewer rating and from the CTS), with parent ethnicity, parent sex, and child sex as independent variables. Table 1 also contains these adjusted group means. Parent ethnicity yielded a main effect on both measures of actual discipline. Relative to African American parents, European American parents were rated by interviewers as using less harsh punishment, $F(1, 908) = 4.68, p < .05$, and they reported less harsh punishment on the CTS, $F(1, 892) = 5.72, p < .10$. Child sex yielded a significant effect for interviewer rating: Parents of boys were rated as more harsh, $F(1, 908) = 5.21, p < .05$. In regard to CTS scores, a parent sex effect, $F(1, 892) = 11.26, p < .001$, indicated more harsh punishment among mothers than fathers, and a Parent Sex $\times$ Ethnicity effect reflected greater differences between African American mothers and fathers, $F(1, 892) = 5.72, p < .05$.

Structural Equation Models

The hypotheses drawn from the theoretical model were tested through structural equation modeling (SEM) analyses performed with AMOS software (Arbuckle & Wothke, 1999). Broadly speaking, we evaluated the fit of two models positing that the effects of SES, ethnicity, and stress on discipline responses are mediated by parenting beliefs, perception of the child, and cognitive–emotional processing of hypothetical social situations. More specifically, a first model, diagramed in Figure 2, hypothesized that SES influenced discipline responses both directly and indirectly. The indirect effect operated through parenting beliefs and stress. This model also hypothesized that stress influenced discipline responses both directly and indirectly. The indirect effect operated through parents' perception of the child and parents' cognitive–emotional processes. Hereafter, we refer to this six-construct model as the *SES–discipline responses* model. The second model, diagramed in Figure 3, was identical to the SES–discipline responses model with the exception that an ethnicity dichotomy score (i.e., a score that compared African American families with the remaining sample) replaced the SES variable in the model. Hereafter, we refer to this six-construct model as the *ethnicity–discipline responses* model.

Table 2 presents the intercorrelations among all variables used in the SEM analyses. Intercorrelations among indicators of the same construct are italicized. In general, indicators of constructs were modestly but significantly correlated. The measurement model did not vary across the two models or SEM analyses. The factor loadings and error terms for the SES–discipline responses model are presented in the Appendix. Parent conflict, preventive strategies, and CTS aggression score were not used in the SEM analyses because they represented poor measurement indicators of the three latent constructs of stress, cognitive–emotional processes, and discipline responses, respectively.

For each model, SEM analyses proceeded in four separate steps. In Step 1, we tested the full mediation model (i.e., a model that included all hypothesized direct and indirect paths of influence linking the six latent constructs).

In Step 2, we modified the full mediation model to estimate the total unmediated effect of either SES (in the SES–discipline responses model) or ethnicity (in the ethnicity–discipline responses model) on discipline responses. By not estimating (i.e., constraining to zero) the indirect paths linking each potential mediator—parenting beliefs, stress, perception of the child, and cognitive–emotional processes—to discipline responses, we forced the total effect of SES or ethnicity on discipline responses to operate through the direct path only. Because this latter “total effect” model was nested within the previous full mediation model, chi-square difference tests could be conducted to test the benefit (or advantage or value) of including the indirect,

mediated relations. A significant increase in model chi-square and a substantial increase in the estimate of the direct effect of SES on discipline responses would provide evidence of indirect relations as presented in the full mediation model.

In Step 3, we followed a similar procedure to estimate the total effect of stress on discipline responses and to evaluate the merit of hypothesizing that effects of stress on discipline are mediated by perception of the child and cognitive–emotional processes. In particular, we constrained to zero the two paths linking, perception of the child and cognitive–emotional processes to discipline responses, estimated the resulting model chi-square, and compared it statistically with the full mediation model chi-square from Step 1.

In Step 4, the full mediation model was tested simultaneously among mothers and fathers (i.e., an SEM multiple-group analysis) to evaluate whether the relations posited in the model varied with—or were moderated by—parent sex. After estimating the paths among latent variables in the two groups simultaneously, we tested the model again with the general constraint that the estimates of these paths were identical across the two groups. If parent sex moderated the relations hypothesized in the full mediation model, the chi-square value of the latter model with equal constraints would be significantly larger than the previous model without the constraints.

For the SES–discipline responses model, SEM analyses were performed with and without control for the demographic variable of ethnicity. For the ethnicity–discipline responses model, SEM analyses were performed with and without control for the demographic variable of SES. On inspection, findings were very similar across these analyses. For each model, we thus chose to report findings obtained when the model included the demographic control. Missing data were handled with listwise deletion. Because the parents (and not the child) were the unit of analysis, all of the analyses reported hereafter were conducted with data from 723 parents (423 mothers and 300 fathers).

SES–Discipline Responses Model

Figure 2 shows the latent path estimates obtained for the full mediation model of Step 1. Lower SES predicted harsher parental discipline, greater stress, and more negative parenting beliefs, and greater stress predicted less positive perception of the child and more intense cognitive–emotional processes. Also, more intense cognitive–emotional processes predicted harsher parental discipline. This full mediation model fit the data satisfactorily, $\chi^2(153) = 416.15, p < .01$, ratio = 2.7), goodness-of-fit index (GFI) = .95.

More important, the SES effect on discipline responses was mediated by the intervening effects of parenting beliefs, stress, perception of the child, and cognitive–emotional processes. When the mediating paths from these variables were constrained in Step 2, there was a statistically significant increase in the model chi-square, $\Delta\chi^2(4) = 176.01, p < .01$. The value of the path linking SES and discipline responses was $-.22 (p < .05)$ in the full mediation model when indirect effects were estimated. This value increased to $-.51 (p < .01)$, however, in the total effect model when all indirect effects were constrained to zero. Together, these findings from Step 2 indicate that not allowing parenting beliefs, stress, perception of the child, and cognitive–emotional processes to mediate the relation between SES and discipline responses resulted in a significantly worse model chi-square. These variables accounted for nearly 60% (i.e., $1 - |.22/.51| = .57$) of the total effect of SES on discipline responses.

Step 3 of the analyses indicated that the effects of family stress on discipline responses also were mediated by perception of the child and cognitive–emotional processes. In particular, when the two mediating paths leading to discipline responses were constrained, we again obtained a statistically significant increase in the model chi-square, $\Delta\chi^2(2) = 9.13, p < .05$, and

a substantial increase in the effect of stress on discipline responses ($\beta = .23$ vs. $\beta = -.08$; see Figure 2).

Step 4 of the analyses revealed that the relations among SES, discipline responses, stress, parenting beliefs, perception of the child, and cognitive–emotional processes were not moderated by parent sex. That is, there was not a statistically significant difference in the chi-square values of the structural equation models with and without the equality constraints on all paths between latent variables, $\Delta\chi^2(12) = 8.19$, *ns*. Thus, there was no evidence that any relation between two latent constructs was different for mothers or fathers.

Ethnicity–Discipline Responses Model

Figure 3 shows the latent path estimates obtained for the full mediation ethnicity–discipline responses model. Even though the multivariate analysis of covariance showed ethnic differences for two of the discipline responses indicators (severity of punishment and rating of harsh punishment), in this model the effect was small. Ethnicity predicted harsher discipline responses and greater stress. In this and subsequent analyses in which ethnicity had a significant effect, being African American was linked to harsher discipline responses and greater stress. Greater stress also predicted less positive perception of the child, and more intense cognitive–emotional processes predicted harsher discipline responses. This model provided a satisfactory fit to the data, $\chi^2(153) = 402.89$, $p < .01$, ratio = 2.6, GFI = .95.

The ethnicity effect on discipline responses was mediated by the intervening effects of parenting beliefs, stress, perception of the child, and cognitive–emotional processes. When the mediating paths from these variables were constrained in Step 2, there was a statistically significant increase in the model chi-square, $\Delta\chi^2(4) = 173.5$, $p < .01$. The value of the path linking ethnicity and discipline responses was .06 (*ns*) in the full mediation model when indirect effects were estimated. This value increased to .12 ($p < .05$), however, in the total effect model when all indirect paths were constrained to zero (see Figure 3). Together, these findings from Step 2 indicate that not allowing parenting beliefs, stress, perception of the child, and cognitive–emotional processes to mediate the relation between ethnicity and discipline responses resulted in a significantly worse model chi-square. These variables accounted for nearly 50% (i.e., $1 - |.06/.12| = .50$) of the total effect of ethnicity on discipline responses.

Step 3 of the analyses indicated that the effects of family stress on discipline responses also were mediated by perception of the child and cognitive–emotional processes. In particular, when the two mediating paths leading to discipline responses were constrained, we again obtained a statistically significant increase in the model chi-square, $\Delta\chi^2(2) = 8.35$, $p < .05$, and a substantial increase in the effect of stress on discipline responses ($\beta = .11$ vs. $\beta = -.01$; see Figure 3).

Step 4 of the analyses revealed that the relations among ethnicity, discipline responses, parenting beliefs, stress, perception of the child, and cognitive–emotional processes were moderated by parent sex. When the full model was tested with and without the equality constraint on all paths between latent variables, the analysis yielded a statistically significant difference, $\Delta\chi^2(12) = 26.35$, $p < .01$. Two paths differed, those between ethnicity and stress (.45 for mothers vs. .10 for fathers) and between stress and cognitive–emotional processes (.40 for mothers vs. .08 for fathers). These two differences suggested that, especially for mothers, (a) being African American was linked to higher levels of stressors than was being European American, and (b) having higher levels of stress was linked to more intense cognitive–emotional processes.

SES Moderation of the Relations Among Ethnicity, Stress, and Discipline Responses

Finally, the hypothesis that SES moderated the relation between ethnicity and stress was explored. This analysis entailed splitting the sample into two groups using a median split on SES ($M = 42.5$). Because the middle-income African American sample was so small ($n = 21$), an SEM analysis could not be used to assess differences in this relation among middle-income parents. Figure 4 shows the latent path estimates obtained for the full mediation model among low-income parents ($n = 355$). Ethnicity predicted harsher discipline responses and greater stress, and greater stress predicted a less positive perception of the child. Relations were greater for African American parents than for European American parents. Also, more intense cognitive–emotional processes predicted harsher discipline responses. This full mediation model fit the data satisfactorily, $\chi^2(108) = 253.80$, $p < .01$, ratio = 2.18, GFI = .93.

The ethnicity effect on discipline responses was mediated by the intervening effects of parenting beliefs, stress, perception of the child, and cognitive–emotional processes. When the mediating paths from these variables were constrained in Step 2, there was a statistically significant increase in the model's chi-square, $\Delta\chi^2(4) = 133.8$, $p < .01$. The value of the path linking ethnicity and discipline responses was .13 (*ns*) in the full mediation model when indirect effects were estimated. This value increased to .23 ($p < .01$), however, in the total effect model when all indirect paths were constrained to zero. Together, these findings from Step 2 indicate that not allowing parenting beliefs, stress, perception of the child, and cognitive–emotional processes to mediate the relation between ethnicity and discipline responses resulted in a significantly worse model chi-square. These variables accounted for more than 40% of the total effect of ethnicity on discipline responses (i.e., $1 - |.13/.23| = .43$).

Step 3 of the analyses indicated that the effects of family stress on discipline responses also were mediated by perception of the child and cognitive–emotional processes. In particular, when the two mediating paths leading to harsh discipline responses were constrained, we again obtained a significant increase in the model's chi-square, $\Delta\chi^2(2) = 9.10$, $p < .05$, and a substantial increase in the effect of stress on discipline responses ($\beta = .17$ vs. $\beta = -.12$; see Figure 4). Given sample limitations ($n = 131$ fathers), the Step 4 analyses to test for gender moderation were not run.

Because the SEM could not be run on the middle-income sample, separate bivariate correlations between ethnicity and stress—the critical path hypothesized to differ—were conducted for middle- and low-income samples. Comparison of differences between low-income and middle-income parents in these correlations revealed a statistically higher relation among low-income parents ($r = .237$) than among middle-income parents ($r = .096$), $z = 1.96$.

Discussion

In this study, two models hypothesizing direct and mediated relations between SES and discipline responses and between ethnicity and discipline responses were tested. Findings of SEM analyses provided some support for these models. After discussing implications of these findings, we focus attention on specific constructs within the models.

SES–Discipline Responses Model

Significant direct and mediated relations were found between SES and discipline responses. As hypothesized, low-income parents tended to endorse more harsh discipline responses in part because they held stronger beliefs about the value of spanking, and they experienced higher levels of stress. In turn, their higher levels of stress were associated with more negative perceptions of the child and more intense cognitive–emotional processes. These findings suggest that SES differences in discipline responses are due to differences in parenting beliefs

and to more intense cognitive–emotional processes that are linked to higher levels of stress. What remains unclear is whether the two paths from these characteristics are mutually distinct or co-occur within individuals. That is, do some low-income parents use harsh discipline responses primarily because of their parenting beliefs, whereas others use harsh discipline responses primarily because their levels of stress and cognitive–emotional reactivity are high? Or do low-income parents use harsh discipline responses because they both believe in their effectiveness and have high levels of stress and cognitive–emotional reactivity? Studies examining within-group differences among low-SES parents (e.g., Kelly et al., 1992) will shed further light on this question.

Ethnicity–Discipline Responses Model

In contrast, the ethnicity–discipline responses model yielded significant but modest direct and mediated effects. For example, the total effect of ethnicity (.12) accounted for less than 2% of the variance associated with discipline responses, whereas the total effect of SES (−.51) accounted for 26% of the variance associated with discipline responses. At first glance, these findings suggest that relations between ethnicity and the specific discipline responses assessed are minimal. However, Kessler and Neighbors (1986) noted that SES and ethnicity interact to minimize the true effect of ethnicity, particularly when stress is involved. They suggested that separate analyses of mediated relations between ethnicity and discipline would reveal a stronger effect among lower income parents than among middle-income parents.

Unfortunately, power limitations precluded use of SEM to examine relations among the constructs with middle-income parents. However, the SEM analysis with low-income parents revealed significant relations between ethnicity and discipline responses. Consistent with the findings of Kessler and Neighbors (1986), African American parents reported higher levels of stress and harsher discipline.

McLoyd (1990) noted a double impact of stressors associated with the combination of low SES and minority group status: African Americans are subjected to heightened societally based stressors associated with being a member of a minority group. As a result, African American parents may experience more intense cognitive–emotional processes and respond more harshly. Moreover, relative to majority-status youth, African American youth historically have been at risk for more harsh institutional and societal treatment, despite similar levels of problem behavior (Snyder, 1996; Stehno, 1982). Given this history, African American parents must incorporate into their socialization practices strategies that will prepare their children to function in settings in which others may respond harshly (e.g., Peters, 1985; Stevenson, 1994; Tatum, 1987). Such a future orientation may predispose low-SES African American parents to experience more intense cognitive–emotional processes. Indeed, review of the adjusted means in Table 1 suggests a pattern among African American parents to report greater worry about the future implications of current misbehavior than European American parents. This pattern is especially striking among mothers of girls. Future research in this area should examine more closely which cognitive–emotional processes are salient for African American parents.

Exploration of SES differences in bivariate correlations between ethnicity and stress—the key path hypothesized to differ—did indicate a statistically weaker effect among middle-SES parents than among low-SES parents. Among middle-SES families, the stressors studied here do not exert a differential impact due to ethnicity. Perhaps economic advantage, in limiting the impact of stressors, attenuates ethnic differences in discipline responses. If this is the case, any ethnic differences in parenting among middle-SES parents may reflect the impact of distinct parenting beliefs. Alternatively, perhaps other stressors exert a stronger differential impact on ethnic differences in parenting among middle-SES parents. McLoyd (1999) has noted that, even among middle-SES individuals, meaningful economic disparities (e.g., job stability and

net financial assets on which to rely in the event of job loss) exist between African Americans and European Americans. Further study of SES and ethnicity interactions with larger samples of middle-SES African American parents and more comprehensive conceptualization of stressors may clarify whether economic advantage serves as a buffer against the impact of stress on parenting among African Americans.

Specificity of Models

Parent sex differences among relations in both models were tested. The findings were discrepant: Parent sex moderated only the ethnicity model. Among mothers especially, African Americans reported higher levels of stressors than did European Americans, and higher levels of stress were linked to more intense cognitive–emotional processes. One would expect that, irrespective of race or SES, women would be more vulnerable than men to the stressors examined in this study. Several stressors are likely to differentially affect women: unplanned pregnancy, number of children in the home, and single-parent status in particular. In addition, these stressors occur with greater prevalence among African American women and are more likely to lead to an escalating chain of subsequent stressors than for European American women (National Center for Education Statistics, 1993; Ventura, Taffel, Mosher, Wilson, & Henshaw, 1995). Thus, these findings suggest that European American mothers may have had more buffers to counteract experiencing the stressors or the impact of stressors.

Another relevant question is the extent to which the models are age specific. Several issues impinge on the generalizability of these models. Age-related differences in the normative challenges associated with parenting could affect parents' cognitive–emotional processes regarding misbehavior. And parents' views of physical discipline and what constitutes harsh discipline could vary with the child's age. For example, parents who endorse physical discipline may not view it as viable or acceptable with adolescents. Thus, tests of model generalizability across age groups would require use of developmentally appropriate measurements of parenting constructs. However, extant research and theory provide some support for the path linking SES or ethnicity, stress, and parenting for children of various ages (Conger, Ge, Elder, Lorenz, & Simons, 1994; Patterson, 1982, 1986).

Parenting Beliefs

Parenting beliefs had a significant relation only with SES. Consistent with the work of Kohn (1963, 1977) and Luster and colleagues (Luster & Okagaki, 1993; Luster et al., 1989), low-income parents were more likely than middle-income parents to endorse the physical use of power to resolve conflict, whether between parent and child or between children. The finding of no relation between ethnicity and parenting beliefs contrasts with other findings suggesting that African American parents and professionals are more likely to endorse spanking (e.g., Deater-Deckard & Dodge, 1997; Heffer & Kelley, 1987). This inconsistency may be due to differences in the specific constructs assessed. In this study parents reported their beliefs in the effectiveness of spanking their child, whereas in the Deater-Deckard and Dodge and Heffer and Kelly studies respondents reported the appropriateness or acceptability of spanking as a strategy. Do these findings suggest that the effectiveness of physical discipline and acceptability of physical discipline represent distinct beliefs about physical discipline? If so, how are these beliefs related? For example, can one believe that a discipline strategy is effective, yet unacceptable? Further research is needed to clarify these subtle yet possibly important distinctions among beliefs about spanking.

It also is possible that no ethnic differences were found because conservative religious beliefs—which are prevalent in the areas from which the sample was drawn—are linked to endorsement of physical discipline (Ellison, Bartkowski, & Segal, 1996; Flynn, 1994) for both

European American parents and African American parents. Unfortunately, we could not examine this possibility; its clarification awaits further research with other samples.

Inclusion of beliefs about the merit of other discipline responses (e.g., withdrawal of privileges and time-out) and parents' general preference for certain discipline responses would broaden understanding of relations among constructs in this model. Because African American parents tend not to equate severity of discipline with physical discipline (Jackson, 1997), beliefs about the use of severe discipline responses warrant examination as well. Parenting beliefs also could be more comprehensively assessed with the inclusion of beliefs about positive interactions with children such as praise, nurturance, supportive parenting (e.g., Pettit et al., 1997), and management of negative affect, which are important elements of parenting that may relate to discipline responses.

Inclusion of racial socialization goals such as preparation for bias (e.g., Boykin & Toms, 1985) in the model would enhance understanding of relations between parenting beliefs and discipline responses and could clarify further the field's developing understanding of variations in African American parenting (e.g., Kelley et al., 1992; Stevenson, 1994; Thornton, Chatters, Taylor, & Allen, 1990). Relatedly, inclusion of parent's racial identity (e.g., Helms, 1990) in the model might clarify within-group differences in relations between cognitive–emotional processes and discipline responses. Among African American parents, those whose identity is grounded in one perspective of their group's history and current challenges may think about and react differently to their children's misbehavior than parents who have a different orientation of the group's history and future (e.g., Spencer, 1983; Thornton et al., 1990).

Cognitive–Emotional Processes

This study is one of few that establishes cognitive–emotional processes as a mediator of the relations between stress and discipline responses and, indirectly, between SES and discipline responses and ethnicity and discipline responses. In both models, findings suggested that parents who experience more stress endorse harsher discipline responses, in part because they experienced more intense cognitive–emotional processes.

As proximal predictors, the four cognitive–emotional processes accounted for at least 48% of the variance associated with discipline responses. When confronted with child misbehavior, parents who attributed hostile intent to their children, who were highly upset by and worried about the future implications of the misbehavior, and who had few alternative discipline strategies were more likely to choose physical punishment and more severe punishment. These findings are consistent with extant research (Dix, Reinhold, & Zambarano, 1990; Mills & Rubin, 1990; Mize, Pettit, & Brown, 1995) in this area, as well as models of social information processing (Dodge, 1993). Dix (1991, 1993) suggested that these processes become intensified when important socialization goals are involved. Bacon and Ashmore (1986) further suggested that long-term socialization goals may be related to discipline responses. A next research step might be to examine more explicitly the effect of parents' long-term socialization goals on cognitive–emotional processes and discipline responses.

Discipline Responses

The potency of cognitive–emotional processes as a proximal influence on discipline responses suggests that the specific discipline responses conceptualized and assessed in this study reflect more reactive discipline responses. That is, more intense cognitive–emotional processes were associated with more harsh discipline responses. In its explicit focus on physical and severe punishment, this study examined only one aspect of discipline: certain power-assertive strategies. Parents routinely use other disciplinary strategies—power assertive (e.g., time-out) and non-power assertive (e.g., reasoning)—in the service of preparing children to function

effectively as adults (e.g., Baumrind, 1997; Jackson, 1997; Lytton, 1997). As a group, discipline strategies may vary in the degree to which they draw on reactive or deliberative processes. These findings suggest that both cognitive–emotional processes and underlying beliefs are related to use of harsh discipline responses. Future research that includes broader assessments of different discipline strategies (i.e., including reasoning, withdrawal of privileges, and time-out) and assesses the degree of deliberation and reactivity leading to use of discipline responses would clarify further the relations found in this study.

Methodological Issues

In this study, parents' cognitive–emotional processes about situationally specific child behaviors were aggregated, as recommended by Holden (1995) and Goodnow (1995). However, perhaps aggregation of attitudes and discipline responses obscures within-individual variation that may exist across situations (Sigel, 1986). Because the current study included only five situations that were not classified and aggregated into more general types, Sigel's hypothesis could not be tested thoroughly. Future research should examine situational sources of within-individual variation in relations between parent cognitions and emotions and discipline responses. Nevertheless, note that parents showed some degree of similarity across the different situations they encountered.

This study's findings must be viewed in the context of its limitations. Aside from those previously discussed (i.e., selection of measures and model conceptualization), another limitation of this study is the use of single reporters, which runs the risk of respondent bias. However, one discipline measure involved an interviewer rating of parent response to misbehavior during the previous year. The rating included the interviewer's knowledge of the misbehavior and parent discipline responses, thus minimizing the risk of respondent bias. Future studies in this area should incorporate observation of parent discipline behaviors; yet, this method faces the challenge of restricted ranges in behaviors (e.g., Deater-Deckard et al., 1996).

Social support has been found to moderate the impact of stress on parenting (McLoyd, 1990). Inclusion of measures of quality of support may clarify the modest relations between ethnicity and stress as well.

Inclusion of parents' own history of being parented also could have enhanced this study's design. Grusec, Hastings, and Mammone (1994) found relations between parents' representations of being parented and their parental cognitions. Perhaps these former representations influence parenting: Parents reared within an explicit system of values and beliefs may be more likely to incorporate their own system of cognitions into their socialization. In contrast, parents lacking a model of a coherent system of beliefs and values may rely on reactive processes. Research on these individual differences would help clarify the relations between cognitive–emotional processes and discipline responses.

Finally, the cross-sectional design precludes conclusions about the causality of these relations. Although we suggest that contextual factors and cognitive–emotional processes temporally precede parents' discipline responses, perhaps long-standing parental cognitions—such as attribution biases—temporally precede, thus influencing cognitive–emotional processes. Or perhaps parents who clearly inform their child of their beliefs about certain types of discipline experience certain cognitive–emotional processes in the face of child misbehavior. Thus, longitudinal inquiry and experimentally designed studies may clarify further how these processes temporally interrelate.

Conclusion and Implications for Application and Policy

Culture and context exert their influences on discipline responses. This study is one of few to show that mechanisms of these influences appear to have at least two paths. One important path, via cognitive–emotional processes and perceptions of the child, may reactively guide discipline responses in the mediation of cultural and contextual influences. Individuals experiencing higher levels of stress are more likely to report more reactive processes and, in turn, to use more harsh discipline responses. Because harsh discipline often is linked with inconsistency (e.g., Patterson, 1982), it may negatively affect children's functioning. Thus, any parent experiencing these intense cognitive–emotional processes may benefit from interventions targeted to reduce their intensity. Promotion of self-monitoring of cognitions and affect, as well as problem solving about alternative discipline strategies, may help make discipline decisions less reactive and harsh. However, focus only on these proximal processes probably will be insufficient for low-income parents, who face stressors related to economic hardship. Policies and programs that effectively reduce these stressors may, in turn, reduce the intensity of the more proximal and mediating cognitive–emotional processes. Because low-income African American parents are especially vulnerable to the combined impact of these stressors and other societally based constraints, interventions that are culturally sensitive and that address the specific barriers that African American parents perceive they face may be more effective.

The second path influencing discipline responses, via parenting beliefs, represents enduring beliefs that may proactively guide discipline responses. Group differences in this relation reflect the impact of culture—for example, SES or ethnicity—on how parents may perceive the need to socialize their children for future success. Because these beliefs and discipline responses may be linked to goals that parents have for their children's success as adults (Kohn, 1963), they may pose unique challenges for interventions that are grounded in a different set of values (e.g., promotion of autonomy vs. promotion of adherence to authority).

These findings suggest that the degree to which the two paths operate jointly or separately may differ as a result of SES or ethnicity. That is, both parenting beliefs and cognitive–emotional processes mediated SES–discipline relations, whereas only cognitive–emotional processes mediated ethnicity–discipline relations. Future research on both paths using more sensitive measures of relevant constructs will extend knowledge of influences on parenting and identify further directions for parenting interventions.

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Appendix

Standardized Factor Loadings and Error Variances for the SES–Discipline Response Measurement Model

Measure	Loading	Variance
SES		
Father education	.86	.51
Mother education	.76	.65
Hollingshead score	.90	.44

Measure	Loading	Variance
Stress		
Interviewer ratings	.40	.92
Unplanned pregnancy	.28	.97
Violence exposure	.40	.92
Single parenthood	.43	.90
Number of children	.18	.98
Discipline responses		
Interviewer ratings	.39	.92
Severity	.65	.76
Physical punishment	.52	.85
Parenting beliefs		
Aggression values	.19	.98
Spanking	.53	.84
Child perception		
Positive affect	.52	.85
Unique description	.60	.80
Cognitive–emotional processes		
Attributions	.21	.97
Being worried	.58	.81
Upset affect	.63	.78
Alternative strategies	.34	.93

Note. SES = socioeconomic status.

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Figure 1.
Hypothesized model of relations among socioeconomic status (SES), parenting beliefs, stress, perception of child, cognitive–emotional processes, and discipline responses.

Figure 2.

Mediation model: Relations of socioeconomic status (SES) with discipline responses mediated through parenting beliefs, stress, perception of the child, and cognitive-emotional processes. Latent path coefficients are presented in standardized units. The coefficients in parentheses are the latent "total effect" coefficients. Adjusted goodness-of-fit index = .95, $\chi^2(153, N = 723) = 416.15, p < .01$. $^{*}p \leq .05$. $^{**}p \leq .01$.

Figure 3.

Mediation model: Relations between ethnicity and discipline responses mediated through parenting beliefs, stress, perception of the child, and cognitive–emotional processes. Latent path coefficients are presented in standardized units. The coefficients in parentheses are the latent “total effect” coefficients. Adjusted goodness-of-fit index = .95, $\chi^2(153, N = 723) = 402.89, p < .01$. $^*p \leq .05$. $^{**}p \leq .01$.

Figure 4.

Mediation model: Relations between ethnicity and discipline responses among low-income parents mediated through parenting beliefs, stress, perception of the child, and cognitive-emotional processes. Latent path coefficients are presented in standardized units. The coefficients in parentheses are the latent "total effect" coefficients. Adjusted goodness-of-fit index = .93, $\chi^2(108, N = 355) = 253.80, p < .01$. * $p \leq .05$. ** $p \leq .01$.

Table 1
Cross-Situational Processing and Discipline Variable Means by Parent Gender, Parent Race, and Child Gender

Variable	Mothers						Fathers									
	European American			African American			European American			African American						
	Boys		Girls	Boys		Girls	Boys		Girls	Boys		Girls				
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD				
Hostile attribution	0.22	0.01	0.23	0.01	0.26	0.03	0.35	0.03	0.25	0.02	0.22	0.02	0.26	0.06	0.27	0.05
Upset affect	4.02	0.03	3.96	0.03	3.94	0.07	4.10	0.07	3.91	0.03	4.01	0.04	3.91	0.14	3.96	0.11
Worry about the future	3.37	0.06	3.36	0.06	3.45	0.14	3.86	0.14	3.33	0.97	3.57	0.07	3.73	0.28	3.83	0.21
Alternative punishments	0.74	0.02	0.79	0.02	0.73	0.04	0.73	0.04	0.78	0.02	0.79	0.02	0.82	0.07	0.81	0.06
Preventive punishments	0.91	0.01	0.91	0.02	0.88	0.01	0.93	0.05	0.93	0.01	0.92	0.02	0.94	0.01	0.96	0.04
Physical punishment	0.06	0.01	0.05	0.01	0.06	0.02	0.10	0.02	0.06	0.01	0.05	0.01	0.04	0.04	0.04	0.03
Severity of discipline	2.49	0.05	2.37	0.06	2.63	0.13	2.94	0.13	2.55	0.06	2.45	0.07	2.77	0.26	2.62	0.20
Harsh discipline rating	0.02	0.06	-0.26	0.07	0.19	0.07	-0.04	0.08	-0.26	0.15	0.17	0.14	0.49	0.29	0.03	0.24
Conflict Tactics Scales score	0.70	0.05	0.51	0.06	0.96	0.13	0.89	0.12	0.60	0.06	0.51	0.06	0.49	0.27	0.46	0.06

Table 2

5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Demographic characteristics																
Stress indicators																
-.20**	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-.26**	.03	.22**	.02	.18**	.05	.09**	.14**	.07**	.07**	.12**	.10**	.06**	.05**	.04**	.03**	.02**
-.33**	.27**	.06	.25**	.02	.02	.09**	.14**	.07**	.07**	.12**	.10**	.06**	.05**	.04**	.03**	.02**
-.14*	.09**	.06	.02	.18**	.05	.09**	.14**	.07**	.07**	.12**	.10**	.06**	.05**	.04**	.03**	.02**
-.25**	.27**	.14**	.25**	.18**	.05	.09**	.14**	.07**	.07**	.12**	.10**	.06**	.05**	.04**	.03**	.02**
Parenting beliefs																
-.16**	.05	.04	.08*	.05	.05	—	—	—	—	—	—	—	—	—	—	—
-.10**	.05	-.01	.00	.06	.02	.09**	—	—	—	—	—	—	—	—	—	—
Perception of child																
.19**	.00	-.09**	-.12**	.14**	.16**	-.01	-.14**	—	—	—	—	—	—	—	—	—
.24**	-.04	-.11**	-.09**	.06	.06	-.10**	.07*	.32**	—	—	—	—	—	—	—	—
Cognitive-emotional processes																
.20**	-.08*	-.04	-.08*	.01	.12**	-.06	-.15**	.08*	.07*	—	—	—	—	—	—	—
-.14**	.09**	.05	.06	.06	.09**	.09**	.09**	-.09**	-.09**	.12**	—	—	—	—	—	—
-.15**	.13**	.05	.07*	-.02	.13**	-.05	.06	-.03	-.02	.17**	.12**	—	—	—	—	—
-.14**	.11**	.08*	.05	.01	.09**	-.06	.10**	-.05	-.06	.10**	.10**	.45**	.10**	.09**	.09**	.09**

[illegible]